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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,014	08/18/2003	Ralph Anderson	KCX-723 (19746)	2961
22827 7590 06/26/2007 DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			EXAMINER CORDRAY, DENNIS R	
			ART UNIT 1731	PAPER NUMBER
			MAIL DATE 06/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/643,014		ANDERSON ET AL.	
	Examiner		Art Unit	
	Dennis Cordray		1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-12,14-18,20-32,34,35,47-59 and 61-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-12,14-18,20,21,26-32,34,35,47-59,61 and 62 is/are rejected.
- 7) ☒ Claim(s) 22-25,63 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The indicated allowability of the subject matter of previous Claims 27-32, 34-35, 50, 56, 62-64 is withdrawn in view of newly discovered prior art. The Amendments to Claims 1, 27 and 47 discussed during telephone interviews with Alan R. Marshall on June 18th and 19th, 2007 has not been entered. The objections and rejections below are thus based on the communication filed on 4/11/2007.
2. Applicant's arguments with respect to the rejections of Claim 47 under 35 U.S.C. 101 and Claims 47-64 under 35 U.S.C. 112 have been fully considered and are persuasive. The rejections have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-8, 10-11, 14-18, 20, 26-32, 34, 47-54, 56-59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espenmiller et al (3245868) in view of Merker et al (6541099).

Espenmiller et al discloses a process of continuously treating paper broke comprising a thermosetting wet strength resin for recycle into the papermaking furnish (col 1, lines 10-23 and 48-68). The broke is generated from trim and slabs from finished

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reels, off-quality rolls, bale trimmings that accumulate during the normal operation and broke that accumulates during abnormal operation in the production of paper products (col 1, lines 38-47). Espenmiller et al teaches that, typically, considerable handling and considerable storage area are typically needed for broke that is either sold to a broker or treated in batch processes at the plant (col 1, lines 24-34).

The continuous treatment disclosed by Espenmiller et al comprises pulping the broke in a pulper at 1% to 10% consistency to shred it to a chip (fibrous aggregate) size of about ¼ inch square (approximately 6 mm) (col 2, lines 57-58; col 4, lines 30-33). The chips are further treated in an inclined screw dewatering tube and a screw feeder that reduces the chip size to about 1/3 of its original size (approx 2 mm) (col 2, lines 62-68). Espenmiller et al discloses additional chemical treatment and defibering of the chips in a rotary refiner (col 1, lines 55-69; col 3, lines 62-65), thus the chips are refined. The use of the language “comprising” and “comprises” in the instant claims does not exclude other treatment steps, thus the chemical treatment step of Espenmiller et al meets the limitations of the claims. The pulping, screw dewatering and screw feeding steps of Espenmiller et al are mechanical treatments and result in chip sizes within the claimed ranges.

Espenmiller et al does not disclose that the adhesive latex is present in an amount from 1 to 60% of the broke, or that a portion of the fiber aggregates are coated with the latex and a portion are relatively free of the latex.

Merker et al discloses a single or multi-layer paper product that has been creped (Abs; col 4, line 61 to col 5, line 5). The paper comprises a creping adhesive applied in

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a pattern covering from 10-60% of the web and applied in a total amount of from 2-10% by weight of the web on each side (col 2, lines 58-64). The creping adhesive can be an acrylate, a vinyl acetate, a vinyl chloride, a methacrylate or a styrene butadiene. In one embodiment the adhesive can be a cross-linked latex, such as an ethylene vinyl acetate copolymer cross-linked with N-methyl acrylamide groups (thus forming a terpolymer) (col 2, lines 20-29). The broke from the process thus inherently comprises from 2 to 20% latex adhesive by weight. Merker et al discloses that the adhesive can function as a wet strength agent (col 5, lines 49-57), thus the broke from the process is the substantially the same broke as that treated by Espenmiller et al.

The art of Espenmiller et al, Merker et al and the instant invention is analogous as pertaining to paper comprising adhesive latex and treating the broke therefrom. It would have been obvious to one of ordinary skill in the art to treat the broke from Merker et al, which comprises an adhesive latex, using the process of Espenmiller et al to continuously recycle waste material and avoid having to store it. The instant claims recite (meth)acrylates as adhesive latex polymers. Acrylates and methacrylates are also thermosetting polymers, thus it would have been obvious to use the method of Espenmiller et al on broke containing an adhesive latex. It would have been obvious to treat broke from a multi-layer web, broke from a creped web where the bonding adhesive is a latex polymer applied in a spaced apart pattern that covers the claimed amount of the surface, and broke that comprising the claimed weight percent as typical brokes from paper products made according to the method of Merker et al. Since the adhesive latex pattern covers only 10% to 60% of the web surface, it would have been

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obvious to obtain some chips from the pulping coated with latex (from the coated portions) and some chips with little or no latex (from the uncoated portions), and to obtain the chips with little or no latex in the claimed percentages.

The chip size due to the pulping of Espenmiller et al overlays the claimed fiber aggregate size, thus the Canadian Standard Freeness of the pulped chips will be in the claimed range or, at least, it would have been obvious to one of ordinary skill in the art to obtain the claimed Canadian Standard Freeness.

4. Claims 12 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espenmiller et al in view of Merker et al, as used in the preceding rejection, and further in view of Danforth et al (6302342).

Espenmiller et al and Merker et al do not disclose that the pulper is a rotor/stator type pulper.

Danforth et al discloses a pulper for handling slabs of reel broke and baled pulp that comprises a circular rotor with blades that rotate within a stator (Abs).

The art of Espenmiller et al, Merker et al, Danforth et al and the instant invention is analogous as pertaining to paper comprising adhesive latex and treating the broke therefrom. It would have been obvious to one of ordinary skill in the art to use a rotor/stator type pulper to treat the broke of Espenmiller et al in view of Merker et al and further in view of Danforth et al as a pulper specifically designed for treatment of broke.

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5. Claims 21, 35 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Espenmiller et al in view of Merker et al and further in view of Harke et al (4560527).

Espenmiller et al and Merker et al do not disclose forming a paper product containing the fiber aggregates.

Harke et al discloses a method of making agglomerated cellulosic particles useful for animal litter using fibers, aggregates of fibers, or fiber-sized pieces of a fibrous cellulosic material feed from wastepaper and paper mill sludge (Abs; col 1, lines 43-47). The cellulosic material feed is mechanically treated in a fiberization or attrition device to shred or fiberize the material into fibers, aggregates of fibers, or fiber-sized pieces on the order of ¼ inch by ¼ inch or less (col 2, lines 42-63). The fibers, aggregates of fibers, or fiber-sized pieces are subsequently formed and dried into agglomerated particles that are advantageously used as an animal litter (col 1, lines 43-57).

Harke et al does not specifically recite latex-containing broke. Wastepaper in general includes coated papers, tissues, labels, cardboard, etc., any of which can contain adhesive lattices and thus have substantially the same composition as the claimed broke. Broke is also a waste paper from the papermaking operation. Harke et al also does not recite pulping the paper but fiberizing cellulosic material having less than 20% moisture content (col 2, line 54 to col 3, line 11). Harke et al does disclose that the agglomerated cellulosic particles are made in a blender by adding water to the blender to form an aqueous solution of the fibers, aggregates of fibers, or fiber-sized pieces containing up to 80% water (col 4, lines 6-59).

The art of Didwania et al, Merker et al, Harke et al and the instant invention is analogous as pertaining to the recycling of waste paper material. One of ordinary skill in the art would have found it obvious to make an animal litter containing the fiber aggregates of Espenmiller et al in view of Merker et al and further in view of Harke et al as a well known use of fiber aggregates from waste paper. An additional benefit would be minimizing the need to rehydrate the aggregates to form the product.

6. Claims 1, 3-8, 10-12, 14-18, 20, 26-32, 34, 47-59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Didwania et al (4735682) in view of Merker et al and Danforth et al.

Didwania et al disclose recovery of cellulosic fibers from latex-containing broke by pulping the broke in an aqueous alkaline solution to partially defiberize the broke, then defiberizing the pulp in a deflaker to substantial completion (refining) (Abs; col 2, lines 10-51). The completely defibered pulp contains latex solids on the individual pulp fibers (coated) (col 2, lines 10-18). The broke has a consistency of about 6 wt% before pulping. No chemical polymer reducing treatment is disclosed in the process and the latex remains with the fibers.

Didwania et al does not disclose the percentage of latex in the broke, the claimed latex species, or that the pulping results in both latex coated and relatively latex free fiber aggregates. Didwania et al further does not disclose the Canadian Standard Freeness of the aggregates. Didwania et al also does not disclose a rotor/stator type

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pulper. Didwania et al does disclose that the pulper is of conventional design (col 2, lines 35-36).

The disclosure of Merker et al and Danforth et al are used as above. Danforth et al additionally discloses that the clearance between the rotor and stator is typically 0.005 to 0.010 inch (5 to 10 mils) (col 4, lines 28-34).

The art of Didwania et al, Merker et al, Danforth et al and the instant invention is analogous as pertaining to paper comprising adhesive latex and treating the broke therefrom. Since broke is generated during the normal papermaking operation, it would have been obvious to one of ordinary skill in the art to use latex containing broke from the process of Merker et al in the process of Didwania et al as a typical source of latex containing broke. It would have been obvious to treat broke from a multi-layer web, broke from a creped web where the bonding adhesive is a latex polymer applied in a spaced apart pattern that covers the claimed amount of the surface, and broke that comprising the claimed weight percent as typical brokes from paper products made according to the method of Merker et al. Since the adhesive latex pattern covers only 10% to 60% of the web surface, it would have been obvious to obtain some chips from the pulping coated with latex (from the coated portions) and some chips with little or no latex (from the uncoated portions), and to obtain the chips with little or no latex in the claimed percentages. It would further have been obvious to one of ordinary skill in the art to use a rotor/stator type pulper to treat the broke as a pulper specifically designed for treatment of broke. The typical clearance between rotor and stator disclosed by Danforth et al overlays the clearance used in the examples given in Example 1 on pp

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16-17 the instant Specification, thus fiber aggregates of the claimed size will be formed or, at least, it would have been obvious to one of ordinary skill in the art to obtain aggregates of the claimed size in the pulping process. Because the aggregate size is the same as that claimed, the Canadian Standard Freeness of the pulped aggregates will be in the claimed range or, at least, it would have been obvious to one of ordinary skill in the art to obtain the claimed Canadian Standard Freeness.

7. Claims 21, 35 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Didwania et al in view of Merker et al and Danforth et al and further in view of Harke et al (4560527).

Didwania et al, Merker et al and Danforth et al do not disclose forming a paper product containing the fiber aggregates.

Harke et al discloses a method of making agglomerated cellulosic particles useful for animal litter using fibers, aggregates of fibers, or fiber-sized pieces of a fibrous cellulosic material feed from wastepaper and paper mill sludge (Abs; col 1, lines 43-47). The cellulosic material feed is mechanically treated in a fiberization or attrition device to shred or fiberize the material into fibers, aggregates of fibers, or fiber-sized pieces on the order of ¼ inch by ¼ inch or less (col 2, lines 42-63). The fibers, aggregates of fibers, or fiber-sized pieces are subsequently formed and dried into agglomerated particles that are advantageously used as an animal litter (col 1, lines 43-57).

Harke et al does not specifically recite latex-containing broke. Wastepaper in general includes coated papers, tissues, labels, cardboard, etc., any of which can

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contain adhesive lattices. Broke is also a waste paper from the papermaking operation. Harke et al also does not recite pulping the paper but fiberizing cellulosic material having less than 20% moisture content (col 2, line 54 to col 3, line 11). Harke et al does disclose that the agglomerated cellulosic particles are made in a blender by adding water to the blender to form an aqueous solution of the fibers, aggregates of fibers, or fiber-sized pieces containing up to 80% water (col 4, lines 6-59).

The art of Didwania et al, Merker et al, Danforth et al, Harke et al and the instant invention is analogous as pertaining to the recycling of waste paper material. One of ordinary skill in the art would have found it obvious to make an animal litter containing the fiber aggregates of Didwania et al in view of Merker et al and Danforth et al and further in view of Harke et al as a well known use of fiber aggregates from waste paper and to minimize the need to rehydrate the aggregates to form the product.

Allowable Subject Matter

8. Claims 22-25 and 63-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Espenmiller et al discloses pulping broke in a pulper to the claimed aggregate size. The aggregates are further treated by cooking with chemicals to break down the polymeric material, then defibered prior to reuse in making paper (col 1, lines 55-69). Didwania et al discloses pulping latex containing broke and then completely defibering

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the pulped matter prior to reuse in making paper (Abs). Harke et al discloses recycling fiber aggregates in the claimed size range obtained from the comminution of waste paper into agglomerates useful as animal litter. The typical practice is to fiberize pulp prior to using it in a paper web. There is no disclosure in prior art of reusing the claimed larger fiber aggregates from the pulper in a multi-layer paper web and one of ordinary skill in the art would not have found it obvious to reuse such large aggregates in a multi-layer web.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DRC


STEVEN P. GRIFFIN
PRIMARY EXAMINER